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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of: **MARK WEINBERG et al.** CASE NO: **CL1375USNA CIP**

APPLICATION NO.: **09/641,149** GROUP ART UNIT: **1714**

FILED: **AUGUST 17, 2000** EXAMINER: **SHOSHO, CALLIE A**

FOR: **FLAME RETARDANT POLYOLEFIN COMPOSITIONS**

AFFIDAVIT UNDER 37 C.F.R. 1,132

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Sir:

I, Jerry P. Moraczewski, a citizen of the United States and a resident of Wilmington, Delaware, hereby declare as follows:

I have a Bachelor of Science degree in Chemistry from the University of Nebraska at Lincoln , and a Ph. D from the University of Vermont.

I am and continue to be an employee of E.I. du Pont de Nemours and Company (DuPont) since 1980. My current title is Technology Associate for DuPont and I currently work for the Engineering Polymers division of DuPont.

In 1995 and 1999, I supervised the running of experimentation on the commercially available polyacetal materials listed in Table 1 below and analyzed the results. In 1995, under my instruction, the mole precent of oxymethylene repeat units in the commercial materials listed in Table 1 was determined by NMR. The procedure was as follows: Approximately 1 wt/vol% solution or gel of each polyacetal was made in DMSO-d_6 at 120 °C. The spectra were collected on a Bruker AM 300 spectrometer using a 90 degree pulse, an acquisition time of 3.4 seconds, a spectral width of 4.8 kHz, and a relaxation delay of 30 seconds. The mole percentages of oxymethylene repeat units present were determined by integration of the appropriate peaks in the NMR spectra.

In 1999, under my instruction, the flexural modulus of these commercially available materials listed in Table 1 was determined. The materials were molded into ISO

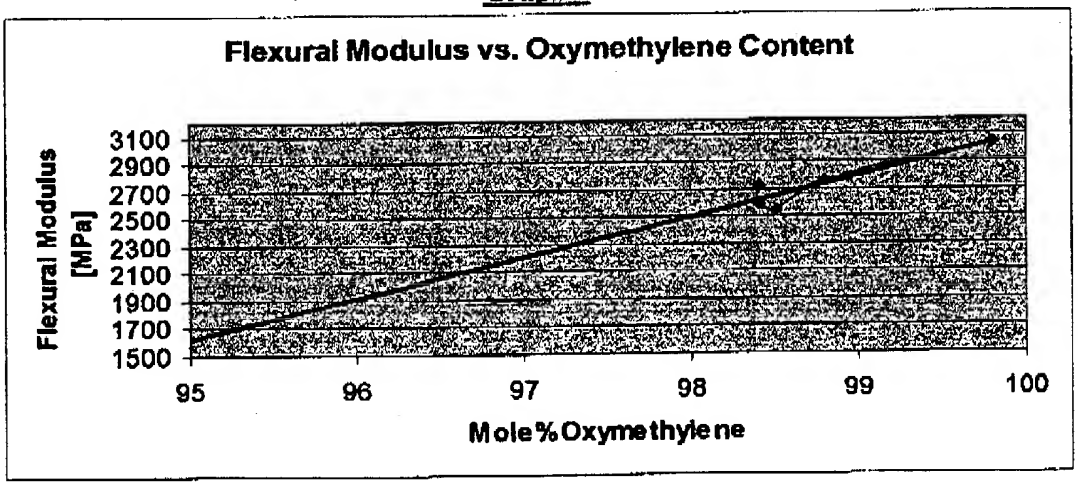
multi-purpose bars using a melt temperature of about 205 °C. The flexural modulus of the bars corresponding to each sample was determined using ISO 178.

Table 1 shows that at a mole percent of ~98% oxymethylene repeat units or greater yields a high flexural modulus (i.e. above 2500 MPa). The attached graph shows the extrapolating of this data down to 95% mole percent of oxymethylene repeat units also yields a high flexural modulus (i.e. above 1500MPa).

Table 1:

Polyacetal	Supplier	Lot	Mole percentage oxymethylene units	Lot	Flexural Modulus (MPa)
Celcon® M90	Ticona	BC40614014	98.4	BC70307017	2945
Tenac® C4520	Asahi Chemical	917281-1	98.4	408481-1	2659
Tepcon® M90	Taiwan Engineering Plastics	512181	98.5	N/A	2659
Kepital® F20-03	Korean Engineering Plastics Co., Ltd.	5CM421U	98.8	8KP4187U	2721
Delrin® 500P	DuPont	RDD2B44	99.8	UID2R69	2891

Graph 1



I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true: and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 4/21/2004

Jerry P. Moraczewski

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